

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P388613

Luminaire Tested: **24CZ2-40-SQR-UNV-L935-CD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P388613  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-40-SQR-UNV-L935-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

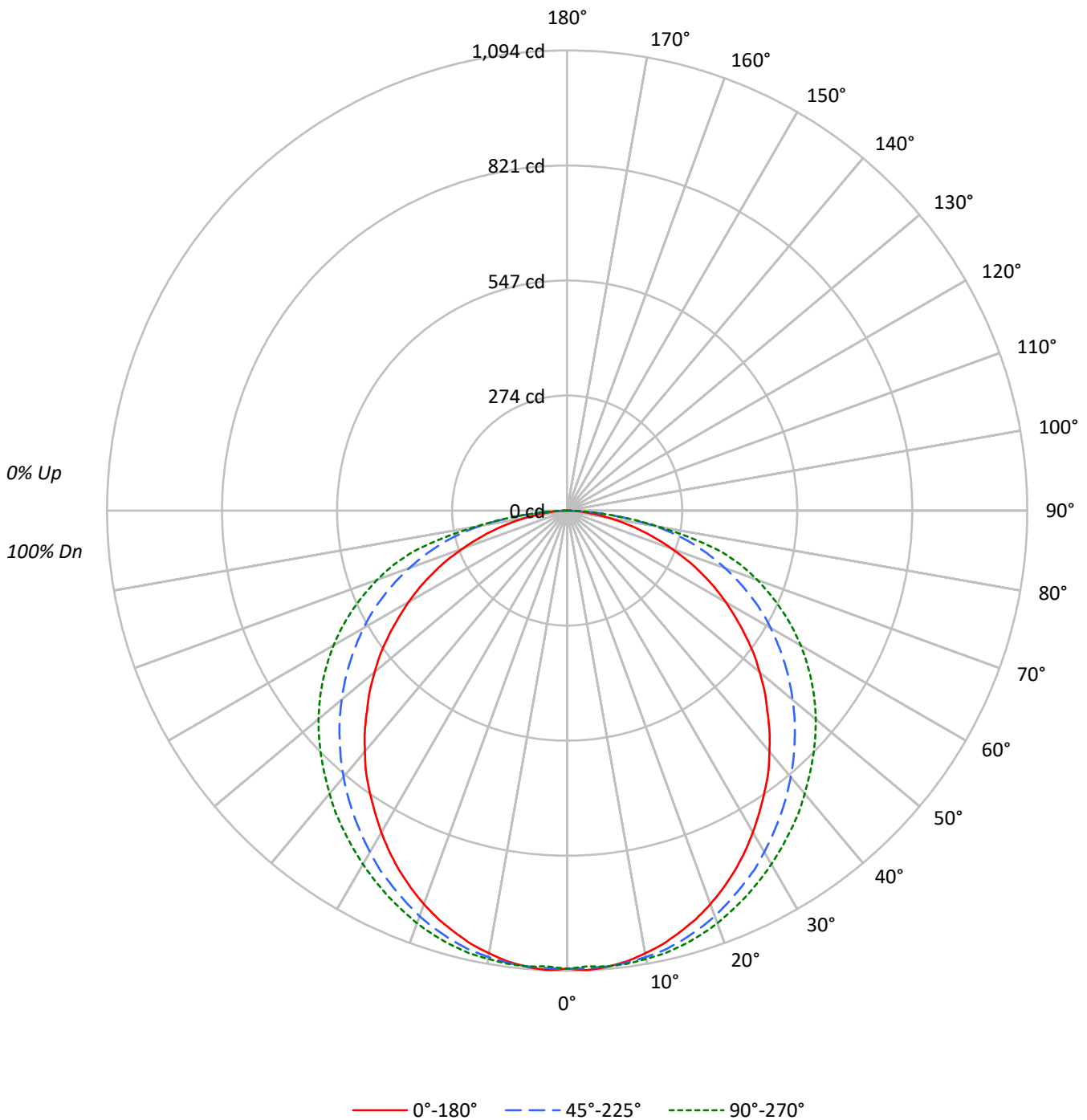
Lumens per Lamp: N/A  
Luminaire Lumens: 3407.1 lumens  
Efficiency: N/A  
Efficacy: 94.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 36.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P388613  
CATALOG NUMBER: 24CZ2-40-SQR-UNV-L935-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P388613

CATALOG NUMBER: 24CZ2-40-SQR-UNV-L935-CD1-U

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1465	1465	1465
5°	1471	1469	1469
10°	1460	1473	1479
15°	1445	1473	1489
20°	1426	1469	1495
25°	1401	1461	1500
30°	1372	1456	1508
35°	1343	1452	1523
40°	1314	1452	1543
45°	1280	1456	1573
50°	1250	1465	1616
55°	1214	1481	1665
60°	1172	1505	1726
65°	1121	1533	1798
70°	1040	1571	1890
75°	941	1626	1977
80°	793	1630	1700
85°	608	1233	1233



TEST NUMBER: P388613

CATALOG NUMBER: 24CZ2-40-SQR-UNV-L935-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.4	3.0
10°-20°	297.4	8.7
20°-30°	451.8	13.3
30°-40°	549.5	16.1
40°-50°	585.1	17.2
50°-60°	557.2	16.4
60°-70°	466.0	13.7
70°-80°	310.7	9.1
80°-90°	86.0	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	852.6	25.0
0°-40°	1402.1	41.2
0°-60°	2544.4	74.7
0°-90°	3407.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3407.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1089	1089	1089	1089	1089	
5°	1089	1082	1088	1088	1088	103
15°	1037	1040	1058	1065	1069	293
25°	944	956	984	1001	1010	435
35°	818	842	884	914	927	512
45°	673	709	765	808	827	520
55°	518	562	631	686	710	463
65°	352	404	482	541	565	348
75°	181	238	313	366	380	192
85°	39	73	80	79	80	48
90°	0	0	0	0	0	



TEST NUMBER: P388613

CATALOG NUMBER: 24CZ2-40-SQR-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1089.1	1089.1	1089.1	1089.1	1089.1
2.5°	1093.6	1085.7	1089.1	1089.1	1084.6
5°	1089.1	1082.3	1087.9	1087.9	1087.9
7.5°	1081.2	1075.6	1084.6	1086.8	1086.8
10°	1068.8	1066.6	1077.8	1081.2	1082.3
12.5°	1055.3	1054.2	1069.9	1074.4	1077.8
15°	1037.3	1039.6	1057.6	1065.4	1068.8
17.5°	1018.2	1022.7	1042.9	1054.2	1057.6
20°	995.7	1002.4	1026.1	1037.3	1044.1
22.5°	970.9	981.1	1005.8	1019.3	1027.2
25°	943.9	956.3	984.4	1001.3	1010.3
27.5°	914.7	930.4	963.1	982.2	991.2
30°	883.2	901.2	937.2	959.7	970.9
32.5°	850.6	871.9	911.3	936.1	949.6
35°	817.9	841.6	884.3	913.6	927.1
37.5°	785.3	808.9	856.2	887.7	904.6
40°	748.2	776.3	826.9	861.8	878.7
42.5°	712.2	742.6	796.6	834.8	852.8
45°	672.8	708.8	765.1	807.8	826.9
47.5°	636.8	672.8	733.6	778.6	799.9
50°	597.4	635.7	699.8	749.3	771.8
52.5°	559.2	598.5	666.0	718.9	741.4
55°	517.5	562.5	631.2	686.3	709.9
57.5°	475.9	524.3	595.2	652.5	676.2
60°	435.4	484.9	559.2	616.5	641.3
62.5°	394.9	444.4	522.0	580.5	604.2
65°	352.1	403.9	481.5	541.2	564.8
67.5°	309.4	363.4	441.0	500.7	523.2
70°	264.4	321.8	399.4	457.9	480.4
72.5°	222.8	280.1	356.6	414.0	435.4
75°	181.1	238.5	312.8	365.7	380.3
77.5°	140.6	198.0	264.4	299.3	302.6
80°	102.4	156.4	210.4	220.5	219.4
82.5°	68.6	117.0	145.1	146.3	149.6
85°	39.4	73.1	79.9	78.8	79.9
87.5°	15.8	25.9	22.5	16.9	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)